IN THE SPECIFICATION

The following paragraphs will replace all prior versions in the specification.

[0002] Capacity planning for packet networks is required to provide adequate quality-of-service. A variety of software tools in the current art can be used for this purpose. One vendor that provides such tools is the Wide Area Network Design Laboratory. A description of their products is available at http://www.wandl.com http://www.wandl.com. A second vendor is Optimum Network Performance. See http://www.opnet.com http://www.opnet.com for more information about their products. Other vendors also exist.

[0005] A variety of protocols are used to route packets. These protocols are defined in specifications at http://www.ietf.org http://www.ietf.org. For example, the Open Shortest Path First (OSPF) protocol is used to route within an autonomous system as described in RFC 2328, OSPF Version 2, by J. Moy. The Border Gateway Protocol is used to route among autonomous systems as described in RFC 1771, A Border Gateway Protocol, by Y. Rekhter and T. Li. The Border Gateway Protocol is also described in RFC 1772, Application of the Border Gateway Protocol in the Internet, by Y. Rekhter and P. Gross. The Multi-Protocol Label Switching (MPLS) technology is used for traffic engineering as described in RFC 3031 Multiprotocol Label Switching Architecture by Rosen, et al.

[0011] Cisco is a network equipment vendor that provides flow record generation. This feature on their products is called NetFlow. Each Version 5 NetFlow record contains source IP address, destination IP address, source TCP or UDP port, destination TCP or UDP port, next hop router IP address, incoming interface address or index, outgoing interface address or index, packet count, byte count, start of flow timestamp, end of flow timestamp, IP protocol, type-of-service, TCP flags, source autonomous system, destination autonomous system, source subnet, and destination subnet. Other formats are also available. See http://www.cisco.com http://www.cisco.com for a detailed description of this feature.

[0044] The format of the source address 402, destination address 404, and type-of-service 406 depend on the specific technology that is used to implement the network. For example, Internet Protocol Version 4 uses 32 bits for addressing and provides four bits for a priority field. Internet Protocol Version 6 uses 128 its for addressing and provides eight bits for a class field. More information regarding these protocols may be found on the IETF website, ~~http://www.ietf.org~~ http://www.ietf.org, which is incorporated by reference.

[0056] A hash set is a data structure that enables efficient searching for a value. See The Art of Computer Programming, Volume 3, by D. E. Knuth, Addison-Wesley, 1997 which is incorporated by reference. An implementation of a hash set is available in the Java class libraries at ~~http://java.sun.com~~ http://java.sun.com. See the documentation for class java.util.HashSet. This class provides a method addKey( ) that can be used to add an entry to the hash set.

[0066] Three configuration files are required for this system. This specification uses the Extensible Markup Language (XML) to format these files. Additional details relating to XML can be found at ~~http://www.xml.org~~ http://www.xml.org which is incorporated by reference. It is to be understood by those skilled in the art that other techniques could also be used without departing from the scope and spirit of the present invention.